

What is claimed is:

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1. In an image forming system having an addressable printhead, a method for forming an image, the method comprising the steps of:

- 5 discharging ink droplets from the printhead onto an imaging medium to create an image; and
- measuring the difference between a parameter of a first ink droplet and a parameter of a second ink droplet.

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2. The method of claim 1, wherein the step of measuring further comprises the step of measuring the velocity of the first ink droplet discharged from the printhead relative to the velocity of the second ink droplet discharged from the printhead.

3. The method of claim 2, further comprising the step of compensating for any
15 difference in velocity between the first and second ink droplets.

4. The method of claim 1, further comprising the steps of:
 storing the measured difference between the first and second ink droplets;
 and
20 controlling the discharging of the ink droplets from the printhead based on the measured difference.

5. The method of claim 4, further comprising the steps of:

generating an ink droplet velocity profile for the printhead from the measured difference between the parameters of the first and second ink droplets; and

compensating for any variation in the ink droplet velocity profile by

5 varying the discharge of the ink droplets from the printhead.

6. The method of claim 1, further comprising the step of adjusting for the difference in velocity between the first ink droplet and the second ink droplet when discharging the ink droplets from the printhead onto the imaging medium to create the image.

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7. The method of claim 1, further comprising the step of varying the discharge of the ink droplets from the printhead to create the image, wherein the variation in the discharge of the ink droplets is based on the measured difference.

15 8. The method of claim 1, further comprising the step of determining the difference in velocity between the first and second ink droplets discharged from the printhead.

9. The method of claim 4, wherein the step of controlling the discharging of the ink droplets further comprises the step of determining an air gap distance between the imaging medium and the printhead, and based on the air gap distance, controlling the discharge of the droplets from the printhead.

10. The method of claim 1, further comprising the step of:

- (a) adjusting at least one of a tilt position of the printhead;
(b) a direction of one of said first and second ink droplets; and
(c) a speed of one of said first and second ink droplets,

5 based on said measured parameter difference.

11. The method of claim 8, wherein the step of determining the difference in the velocity between the first and second ink droplets further comprises the step of determining a variation between the first and second ink droplets to compensate for
10 image medium thickness.

12. The method of claim 1, further comprising the step of adjusting said measured parameter difference as a function of one of the distance between the printhead and the imaging medium, time and temperature.

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13. The method of claim 1, further comprising the step of adjusting one or more ejectors of said printhead as a function of said measured parameter difference.

14. In an image forming system, a method of forming an image with a printhead, the method comprising the steps of:

discharging a first set of ink droplets and a second set of ink droplets from the printhead;

determining differences in distance between the first set of ink droplets and the second set of ink droplets when deposited on a print medium; and

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controlling the discharge of the ink droplets from the printhead based on the differences in distance.

15. The method of claim 14, wherein the step of determining the differences in distance between the ink droplets of the first set and the ink droplets of the second set further comprises the step of determining an air gap distance between the imaging medium and the printhead.

16. The method of claim 14, further comprising the step of characterizing the printhead to determine velocity variations in ink droplets, and scheduling the discharge of the ink droplets based on the printhead characterization.

Sub Q4
15 17. An image forming system, comprising:
a printhead;
a processor for controlling the printhead; and
a printhead facility coupled to the processor for controlling the printhead based on differences between a parameter of a first ink droplet and a parameter of a second ink droplet discharged from the printhead.

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20 18. The system of claim 17, wherein said differences between parameters further comprises an air gap distance between the printhead and an imaging medium.

19. The system of claim 17, wherein the processor varies discharge from the printhead based on the differences between the parameter of the first ink droplet and the parameter of the second ink droplet.
- 5 20. The system of claim 17, wherein the printhead facility determines the velocity of the first ink droplet discharged from the printhead relative to the velocity of the second ink droplet discharged from the printhead based on the differences between the parameter of the first ink droplet and the parameter of the second ink droplet.
- 10 21. The system of claim 20, wherein the printhead facility compensates for any difference in velocity between the first and second ink droplets.
22. The system of claim 17, wherein the parameter comprises drop position data corresponding to at least one of said first and second ink droplets.
- 15 23. The system of claim 17, wherein the printhead comprises one or more ejectors, and wherein one of the printhead facility and the processor adjust said one or more ejectors as a function of said measured parameter difference.

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